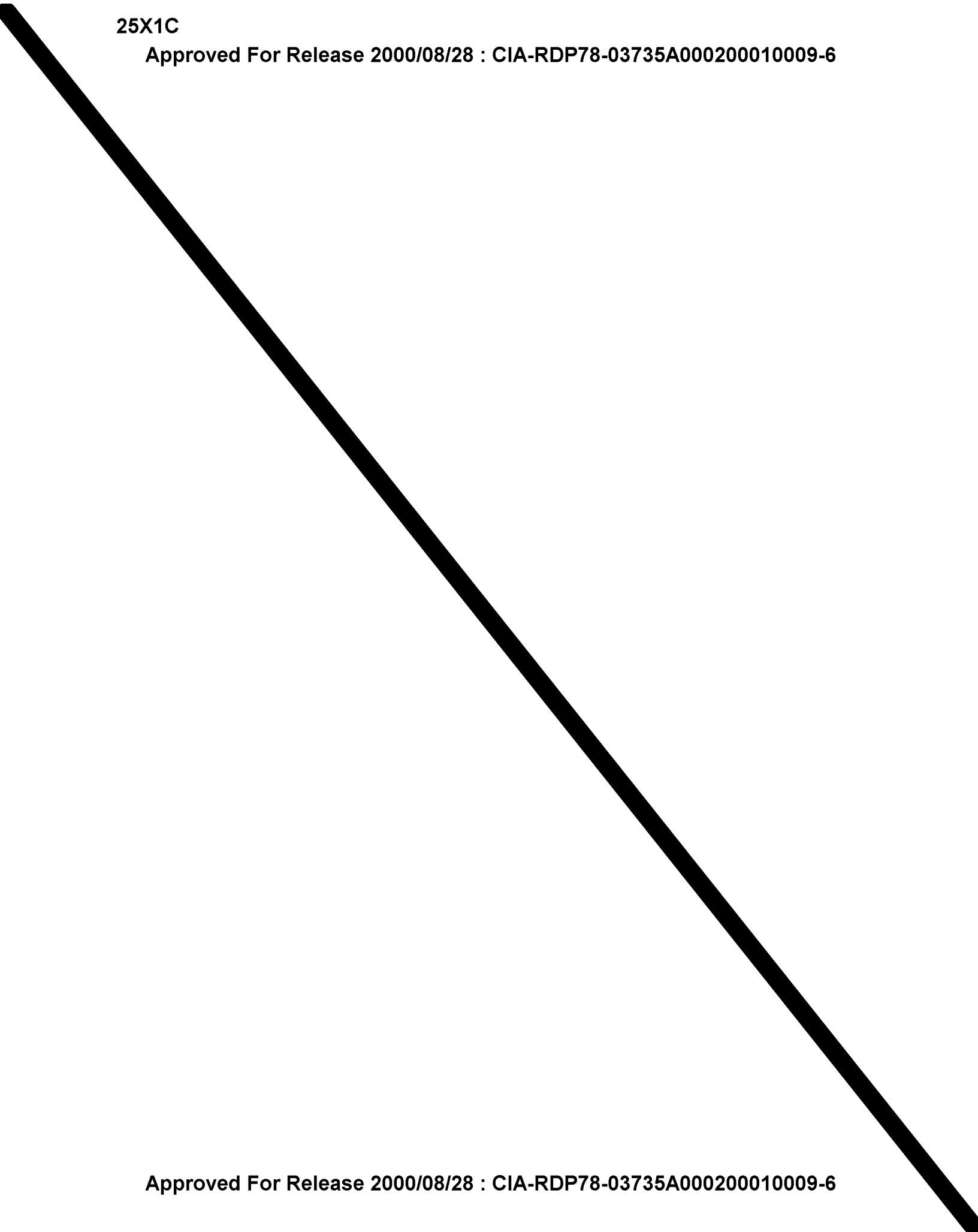

25X1A

found that the platform was incompatible with the foundation 25X1A
which had been built by [redacted] according to plans which had been approved by [redacted] Approximate cost to correct this was _____.

e. Shock Platform--The platform mechanism was never assembled and checked out as a system prior to installation in the boat. It would have been prudent to check this system for design "bugs" by complete assembly and simulated application of operating loads. We will not know until we go to sea whether the design is correct.

f. Turbine Exhaust Transition Piece--This sheet medal work of great complexity was fabricated by [redacted] A 25X1A
radius dimension on the plan was wrong. There was no [redacted] 25X1A
check made on this until the transition piece was delivered dockside. It was then belatedly discovered by [redacted] that the piece was incorrect. A model should have been made to ensure a satisfactory transition piece. Loss of time is approximately 1½ weeks. Cost to correct mistake _____. 25X1A

g. Plenum Chambers--Tolerances unrealistic for a welded aluminum structure. Result--[redacted] is spending several days grinding the plenum to fit the turbine intake piece. 25X1A

h. Shottel Units--Port shottel will hit port rudder unless rudder is kept within 8° of midships. Also, port shottel hits trim tab. Trim tab had to be relieved. Rudder and/or shottel could be damaged if rudder is inadvertently turned more than 8°.

i. Shottel Units--Port shottel trim tabs were damaged when unit was raised. Port unit does not clear transom unless in "forward" position.

j. Shottel Units--Shottels are leaking sea water into the boat. Port unit leaks about 8 gallons per hour. 25X1A
Believe [redacted] should have had a shottel factory mechanic on 25X1A
hand for installation and testing of shottel units. Both [redacted] are ignorant concerning installation and 25X1A
operating procedure. [redacted] to date has been unable to make the hydraulic system work.

k. Shottel Units--Lube oil was not put into the units prior to launching of the boat. The units were immersed in sea water for 16 days without oil in the gearbox. Believe oil seals and water seals were dry and that 25X1A
there is a possibility that sea water entered gearboxes. 25X1A
[redacted] should have given instructions to [redacted] on lubrication.

l. Shottel Units--The shottel units as delivered are incompatible with the rotation of the [redacted] diesels. If [redacted] had put in a clarifying sentence in their purchase order, this could have been avoided. A simple requirement that "shottels should be compatible with [redacted] diesels having clockwise rotating engine flange when viewed from aft" would have sufficed. Minimum delay in completion of boat is four weeks. Maximum cost is [redacted]. Estimated delay in completion of boat is 18 weeks. 25X1A 25X1A 25X1A

m. Shottel Units--In addition to the foregoing problems, the boat design should have provided opposite rotating propellers on the shottel units for better maneuverability.

n. Shottel Units--Present installation makes it impossible to remove the shottels without removal of a large amount of auxiliary equipment inside the boat. Installation of a spacer ring with studs will permit easy outside removal of the units.

o. Fuel Tanks--Access holes in sides of tanks #7 and #8 cannot be reached because they are blanked off by sides of after shock platform.

p. Magnetic Compass--Radar consoles and transceiver units have warning plates regarding minimum distance from magnetic compass. Radar is too close to compass.

q. Interior Lighting--[redacted] specified 24 volt aircraft lighting fixtures, presumably to reduce weight. However, they are hooked up to a 24 volt A.C. circuit which requires transformers weighing approximately 70 pounds. How does this save weight? Also, the lighting appears to be inadequate. 25X1A

r. Diesel Exhaust Lines--[redacted] did not provide detailed plans on exhaust lines. Result, the lines as installed have excessively sharp bends which increases exhaust back pressure and reduces power. One exhaust bend is approximately 135°. It could have been installed as a 90° bend. 25X1A

s. Turbines--It is understood that the [redacted] turbines, because of their light construction, are not to be walked on. Also, it is understood that scratches in the casing can cause cracking at operating temperature. 25X1A

The turbines have been walked on numerous times since installation. Workmen have been observed dragging tools across the turbine casing. [redacted] should be providing inspection and supervision to prevent this. 25X1A

t. Blueprints--Many errors have not been detected when blueprints were reviewed and approved by [redacted] with resultant confusion and delay. Plans were not sent to [redacted] in sufficient time to allow for procurement of non-stock items. Plans, when sent to SOD, have been received too late to detect and prevent errors. The long time required to obtain plans and turbine test data has been embarrassing in our dealings with the U.S. Coast Guard regarding inspection and certification of the boat. 25X1A 25X1A

2. In general [redacted] performance has left something to be desired. Errors, when detected, required an inordinately long time to correct. Checking on the compatibility of systems and components has been very weak and too much has been taken for granted. Occasionally [redacted] personnel were not present on the boat when important events were taking place, i.e., the starting of the GM diesels for the first time. When [redacted] personnel have been present, it has been obvious that they are not well versed in the complexities of the various systems. A case in point is their present groping to figure out how the shottel system works. In some cases their "experts" seem to have hindered rather than helped the [redacted] workmen in making a system work. An example of this was the fumbling around on 22 July in trying to make the Sperry steering system work. The [redacted] electricians could probably have done better without the advice they received from [redacted] personnel. It is apparent that [redacted] personnel are learning on the job and are solving the problems through a costly and time consuming trial and error process. 25X1A 25X1A 25X1A 25X1A 25X1A 25X1A

Some of the problems inherent in cramming a large amount of machinery into a small space could have been solved by construction of a model. In the long run it would have saved money. (To solve the turbine transition piece problem, [redacted] found it necessary to make a model.) 25X1A

[redacted] 25X1A

0 - C/SOD
1 - [redacted]le
1 - [redacted]
1 - [redacted] 25X1A
1 - [redacted]
1 - [redacted]
1 - Chrono